Racism and Ageism in Health Care – A Comparison between Germany, the Netherlands and Indonesia

Extended Abstract

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Introduction

Discrimination is a highly discussed issue in politics (Guiraudon, 2003; Personen *et al.*, 2009) and the academic world (Oskamp, 2000; Fryer & Torelli, 2010; Quillian, 2006) since one of the most prominent consequences of discrimination is a lower health status (Borrell *et al.*, 2006). Discrimination is a different treatment of a person or group based on criteria that are rejected by normative reasons (Schlotböller, 2008).

But why does discrimination occur? Becker (1971) offers one explanation: If a minority population grows, the majority population is often afraid that the minority population will gain power. Its members often experience discrimination because the majority feels threatened by their competition, especially if the population growth was not expected. The German population is currently experiencing changes that arise from increased minority growth. The native population is aging due to decreasing fertility rates, and rising life expectancies due to better medical treatment (Bundesinstitut für Bevölkerungsforschung, 2014). The Total Fertility Rate (TFR) was 2.5 in 1960s, while it decreased to 1.36 in 2011 (Bundesinstitut für Bevölkerungsforschung, 2014). As a result of these demographic shifts, the economically active population is decreasing (Angenendt, 2008).

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This decrease can also be illustrated by the old-age dependency ratio. In 1990 this ratio was 23.6 %; in 2010 it grew to 33.8 %, in 2030 it is expected to increase to 52 %, and in 2060 it is expected to grow to 65 % (Statistisches Bundesamt, 2014a; 2014b). Such change makes it necessary to recruit more people to fill job vacancies (Remery et al., 2003). One solution, on which the German government decided, was to hire an increasing number of workers from abroad. This started in the 1960s with guest workers[1] (Constant & Rinne, 2013; Papademetriou, 1991). Another migrant group arrived in the 1990s due to diaspora migrants[2]. Although the large immigration numbers were not large enough to stop the population decline, recent decline would have been much larger without a positive migration balance (Münz *et al*., 2007). Thus, the influx of a foreign population is a normal outcome of the demographic transition that occurs with an aging population: a fact that has previously been predicted by several scientists (Global Agenda Council on Ageing Society, 2012; Bijak *et al*., 2013). Despite the benefits, the increasing migrant population poses challenges to the society and the welfare state in Germany, which the Germans were not prepared for (Hinrichs, 2012). The main challenge of the growing elderly and migrant population is the integration into the society. If integration does not happen, negative attitudes and stereotypes are building up against the growing minorities. This in turn can result into discrimination, specifically in race discrimination and age discrimination.

Also the Netherlands has a growing elder population. The age group of 65 years and older is expected to increase by about a quarter of the population by the year 2040. But also the whole population will experience an increase by about one million in the next 30 years (Statistics Netherlands, 2014). These are typical characteristics of the penultimate stage of the demographic transition: A slow growth of the whole population, while mainly the elder population is growing. In contrast to the Dutch population Germany's population is expected to decrease and therefore counts as the last stage of the demographic transition. Furthermore, both countries used to recruit "guest

[1] Germany used to recruit "guest workers" to obtain temporary workers, who were expected to return to their home countries after they finished their jobs (Maussen, 2009).

[2] Diaspora migrants are ethnic Germans, living in the Soviet Union who migrated back to Germany after the Second World War (Silbereisen, 2008).

workers", who were expected to return to their home countries after they finished their jobs (Maussen, 2009; Huhn, 2005; Schramkowski, 2007; Schildt, 2007; OECD, 2013).

In contrast to the situation in Germany and the Netherlands, developing countries are characterized by a younger population (Population Reference Bureau, 2014). Since discriminatory behavior is a learnt behavior, it differs in different cultures, and often partly changes along with development of the society (Van de Kaa, 2002). In the second demographic transition theory (Van de Kaa, 1987; 1994) and in the modernization theory (Inglehart & Welzel, 2005), it is reported that value change is closely linked with development. The silent revolution towards individualism and self-expression has changed attitudes towards the elderly. Since developing countries are in a less advanced stage than developed countries and have not gone through the silent revolution yet, attitudes towards the elderly and immigrants often differ between them (Tang *et al.,* 2009; van de Kaa, 1994). This leads to a smaller degree of ageism, since the younger population views the elderly more positively in developing countries.

This leads us to our research question: How does discrimination in developed and developing countries differ? As developed countries, Germany and the Netherlands were chosen, and as a developing country, Indonesia was chosen in order to test whether discrimination can be explained by the value change of the second demographic transition theory. Furthermore Germany and Indonesia have been compared regarding intergenerational support in different cultural contexts (e.g. Schwarz *et al*. 2010). This research was highlighting the differences in cultural values towards the intergenerational

relationship between Germany and Indonesia. Therefore Indonesia is also a good comparison in order to study the value change of the second demographic transition, which is influencing ageism.

Indonesia was also chosen as a developing country for this research, in view of the fact that the country has a similar migration history as Germany and the Netherlands: while Moroccans and Turks came to Germany and the Netherlands due to economic reasons (Castles & Miller, 2009),

Chinese immigrants came to Indonesia for similar reasons (Winarta, 2008). However, we have to keep in mind that while in Germany and the Netherlands, these migrant minorities have a lower socio-economic status on average (Büchel & Frick, 2004; Gijsberts & Dagevos, 2007), in Indonesia the migrant minority of the Chinese have a higher socio-economic status on average (Giblin, 2003). There are no reliable records on the number of Chinese in Indonesia. The estimated number of Chinese in Indonesia is between 1.5 % and 2.4 % of the total population (Suryadinata *et al*., 2003). Furthermore, Indonesia was a former colony of the Netherlands for about 350 years, resulting in a mutual cultural influence. Cultural experience is part of socialization, which determines perceived cultural norms and influences behavior towards other people, like discrimination (Cummings & Ferraro, 2003).

One prominent method for the assessment of discrimination is the experimental vignette study (Kaduszkiewicz *et al.,* 2008). While surveys with the discriminated group can only measure perceived discrimination, vignette studies measure objective discrimination (Kaduszkiewicz *et al.,* 2008).

Many economists used vignette studies to measure discrimination in the hiring process. For example, in a study by Bertrand and Mullainathan (2003), fictitious resumes with different names either a typical African American name or a typical White American name were sent around. Employers were more likely to respond to resumes with White American names than African American ones.

Other economic outcomes in the United States have been established to be correlated with race as well. Doleac and Stein (2010) conducted a study on racism. IPod advertisements were placed on online mediums. The responses were then judged and analyzed. The racial difference was highlighted by the hand in which the iPod was held (Black, White, or White and tattooed). The results of the data showed that advertisements with a Black hand received 13 % fewer responses and 17 % less offers than those with White hands. Further, the price offered to Black sellers was less. Less trust was shown as well, although no information was given regarding names in email addresses, accepting delivery by mail, or long distance payment (Doleac & Stein, 2010).

Besides racism, ageism also is studied with a vignette design. For instance, Riach and Rich (2006) sent unsolicited inquiries about job openings for male waiters in France and England for a 27-year-old man and a 47-year-old man, with findings of clear discrimination against the older waiter. Employee–employer relations are highly affected by ageism in the society, with the elder employees receiving significantly more rejections in comparison with their younger colleagues (Rupp *et al.,* 2006). This practice of ageism even extends to the provision and quality of medical care. Ivey *et al.* (2000) evaluated the details of two couples, one older and one younger, both with issues such as absence of sexual intimacy, more arguments, etc., by professional marriage and family therapists and laymen. The results led researchers to believe that the relational and mental health concerns experienced by the elder couple are not perceived as seriously as identical concerns experienced by the younger couple (Ivey *et al.,* 2000). However, in some health departments, ageism can be attributed to negative misconceptions of this group, such as inefficiency of psychotherapy for depression for the elderly.

Also, both ageism and racism have been studied together in the medical sector. Mental illnesses of the elderly of minority groups are observed to be quite significant (Marwaha & Livingston, 2002). Thus, a vignette study with White British and Black African-Caribbean people was carried out to demonstrate that most older people, specifically Black Africans, did not view depression as a mental illness, and therefore did not seek psychiatric services (Marwaha & Livingston, 2002).

Clinical vignette studies have been used "for more than 30 years to measure variation in physicians' approaches to diagnosis and treatment of patients with similar health problems" (Veloski *et al.,* 2005). Contrary to medical record reviews and analyses of claims, data sets in a controlled study design can exclude all other factors except for the measured variable, in order to explain the difference in diagnosis and treatment of the patient or selection of tests (Veloski *et al.,* 2005). Furthermore, vignette studies are more cost-effective than studies of standardized patients. "A standardized patient is an individual who has been trained to portray a patient in a consistent manner and has the capability

of health issues." (La Marra & McConvey, 2012). Uncontrolled experiment settings have been highly criticized, since applicants from different groups may not appear as identical otherwise (Rubineau & Kang, 2012).

However, Rubineau and Kang (2012) used the a quasi-audit study by using results from the standardized patient training of medical students, and focused on the effect of race, and how this changed over time. They used the longitudinal data of medical students within their first and second year. Their results indicated that racism increased from the first to the second year.

One such experimental vignette studies was used by Schulman *et al.* (1999) to study objective discrimination, e.g., the effects of race and sex on the physicians' recommendations for cardiac catheterization. They studied actual discrimination, e.g., whether race and sex indeed affected the physicians' recommendation for cardiac catheterization. Eight actors were recruited to portray a patient's interview. The experiment was controlled for the following factors: age (55 or 70) and level of coronary risk (low or high). All possible combinations with the independent variables (race and sex) of the respective factors were used. The eight patients were identical in their hand motions, script, gowns, and the camera position in every interview. As assumed in the hypothesis, race and sex affected the physicians' recommendation. Women and black patients were less likely to be diagnosed with angina pectoris.

Methods

Based on approach of Schulman *et al.* (1999), this paper replicated the study in Germany, the Netherlands and Indonesia, and added questions on attitudes towards the elderly, migrants and religion, due to cultural differences, discrimination might occur differently in other countries. While both negative racism and ageism in Germany and the Netherlands were expected, in Indonesia, only

negative racism was expected, but ageism was expected to be positive. As in the Schulman *et al.* (1999) experiment, this study was designed as a lab experiment about the effect of race and age on physicians' treatment recommendations. Video-recorded interviews with the translated script of the original study were shown to physicians on a computer, displaying patients describing symptoms. Based on these videos, a survey was given to the physicians and prospective physicians, who had to categorize the severity of the cardiac disease, give recommendations concerning the treatment, and evaluate the patient's character. Unlike the original study, medical students were also included in the study, since they are prospective physicians and the future of patients will lie in their hands. In this way, it could also be analyzed whether racism and ageism might be practiced to a smaller degree. Furthermore, the age of the decision-maker might have an impact. Thus, medical students were not the only people used, but a representative sample, which allows better generalization of results to a more representative population.

For the preparation of the videos, an experienced company for video and photo production was hired. Four professional male actors were recruited in each country, since they were experienced in expressing the range of emotion and code of behavior given in a script. No one who was involved in the movie production knew which type of chest pain (definite angina, possible angina, or non-angina) belonged to which script. Each physician saw only one video with one case. Thus, the physicians were not aware that the patients were only actors.

Furthermore, this study controlled for more variables, which could influence the physicians' recommendation: the script of each type of chest pain, hand motions, clothing, gowns, and camera position were identical. The younger and older actors of both natives and migrants were always blood-related to each other, except in Germany. Furthermore, no significant difference in attractiveness could be found ($p>0.05$).[3] Three different scripts were used with different levels of severity of chest pain

[3] 10 students have been asked to rate all patients from all countries by attractiveness. It is important that no patient is more attractive than others since this can lead to bias in the assessment of the patient.

(definite angina, possible angina, or non-angina). Thus, unlike the Schulman *et al.* (1999) study, only twelve different cases were prepared (instead of 144), with all possible combinations of the independent variables: race (Indonesian-Chinese or Indonesian patient; German or Turkish patient; Dutch or Moroccan patient), age (37 or 57 years old patient) and type of chest pain (definite angina, possible angina, or non-angina). Again unlike the Schulman *et al.* (1999) study, our patients were younger (37 and 57 years old vs. 55 and 75 years old), since the average life expectancy in Indonesia is only 71 years (WHO, 2014). Ten physicians (four physicians working in internal medicine, three physicians working in another field than internal medicine and three medical students from different years) were asked to evaluate the cases. The cases were very clear, and there is no doubt about the type of chest pain if a patient is complaining about pain in the arm in the not angina pectoris case, since standard textbook cases are used. Therefore any systematic error rates in the diagnostic decision tasks will be classified as discrimination. A worse categorization can lead to non- treatment of the disease and thus to a worse health status and a better categorization is not appreciated either, since the further treatment of angina pectoris can be quite expensive which is not beneficial for the patient, if not even harming the patient.

A vignette study design was used in order to control for the independent variables. Furthermore, in order to exclude gender effects, only male patients were used, since with women, pregnancy and other factors would have to be taken into consideration.

The physicians first received the medical information, which together with the video interview, would allow for an objective diagnosis and would not influence age. Furthermore, socioeconomic status was controlled for by providing the occupation. The patient was either a bank manager or retired bank manager (depending on the age). Afterwards, they were asked about characterization of the type of chest pain, and recommendation of a stress test for the patient, with four given options. After they were shown the stress-test results (thallium stress test which was the most expensive one and most appropriate for angina pectoris, regular stress test which was second best, no

stress test which was only appropriate for the categorization “not angina pectoris” and other stress test than the regular or thallium stress test), physicians were told to estimate the probability of coronary disease, and whether to refer the patient for cardiac catheterization. The experiment included items that assess the physicians’ judgment of the emotional, intellectual and communication characteristics-items that evaluated the personal characteristics of the patients (a 6-point Likert scale was used). Later, the physicians were asked for the year of their graduation. In order to investigate into the perceived cultural attitudes, questions about their perception of elders, the well-being, and the everyday life of the elderly had to be answered. In addition, they were asked about their attitudes towards ethnic groups. In this way we can study the attitudes towards the elderly and immigrants and see if the second demographic transition has changed the attitudes towards the elderly. Lastly, the physicians were given questions on their religious attitude, religious confession, and were asked to provide demographic and ethnic details of themselves. Out of the questions on attitudes towards the elderly and immigrants, constructs were built:

The first construct, which was built, was preferred living condition. The questions of this construct consisted of the questions whether they want to live with their children when they are older, whether family should take care of the elderly and if they preferred to live in an elderly home. This construct was tested in order to see how the relationship between the younger and population is. Schwarz *et al*. (2010) has shown that if children take care of older family members that the relationship between the younger and older generation was better and that the younger population had a more positive attitude towards the elder population.

The second construct was about negative stereotypes towards the elderly. The construct consisted of the questions if the elderly had no one to talk to, were stuck in an elderly homes, were not useful to work, and did not get angry so quickly.

The third construct was on attitude towards immigrants. The construct consisted of the questions if immigrants should only enter the country, if they have a job, if the government should be stricter on immigrants and if the government should prohibit the immigrants to enter the country.

The fourth and last construct was about religiousness, which consisted of the questions if religion played an important role in their lives and how often they were praying.

Afterward, the physicians were paid for participating in an incentive economic experiment. The physicians in Germany and the Netherlands had a prospect of up to 16 Euros (US $ 21.63), which could have been earned in the economic experiment followed after this one. In Indonesia the physicians had an incentive of up to 100,000 RP (US $ 8.77). In order to put it into the relation with the GDP (PPP): The GDP (PPP) per capita is US $ 40.901 in the Netherlands, US $ 43.198 in Germany, and US $ 4.956 in Indonesia.

To assess the effect of the race and age of the patient on the decisions of physicians regarding the diagnosed referral, cardiac catheterization and personality of the patient were analyzed. Race and age of the patient were included in these models by analyzing the main effects of race and age.

Afterwards, if the independent variables were significant in the model with the control variables, ANOVA tests were performed with the attitude questions on the elderly, immigrants, cultural diversity, and religion. Again, the above mentioned variables were controlled for, as for the other questions.

In Germany, the participants were recruited from Bremen, Lower Saxony and North Rhine Westphalia (partly from the same hospital as the studies on perceived discrimination), and in the Netherlands they were carried out in the regions Groningen, Friesland and the western regions in the Netherlands called Holland. These regions were chosen, since the region of Groningen consists mainly

of students and elder people, Friesland consists of very few migrants and many elder people, and Holland mainly possesses the economically active population and many migrants. Thus, as in Germany, we have a large variety in the sample.

The video was either shown to the physicians in the hospital, where a room was offered to conduct the laboratory experiment, or they could view it on the internet and fill in the questionnaire online. The difference between the laboratory experiment and the online questionnaire was not significant ($p>0.05$). Due to the sampling method of the laboratory experiment and the online questionnaire, no response rate can be given. The greatest limitation of this sampling method is that compared to the laboratory experiment, we could not control for the circumstances and outside influences in the online questionnaire, which could have biased the results. With an online questionnaire you have to take into account that we can never be certain that the participants we sent the online questionnaire paid attention to the video while watching it and if they filled out the questionnaires themselves.

On the other hand they might be more honest in their answers than in the laboratory experiment due to the anonymity. However, we also have data on the time the physicians spent watching the video and no significant differences were seen between those two samples. The doctors who participated in the offline survey were in a separate and private room in the hospital. They first saw the video of the patient and when they continued they were asked to answer the questionnaire. The doctors who participated in the online survey received an email and were asked to take 15 minutes of their time. When they clicked the link in their email the video started and the questionnaire followed subsequently. In both surveys, offline and online, the computer screen looked similar. The participants who did the online version got paid via credit transfer whereas the participants who did the offline version got paid with cash. All analysis was conducted separately for the online and offline subjects. Due to no differences the data could be pooled.

The experiments were conducted between February 2012 and May 2013. Physicians above 55 years were referred to as “elder” physicians. For convenience, physicians with a migration background will be referred to as migrants. The following variables were controlled for: ethnicity and age of the physician and severity of cardiac disease. Furthermore the data of Germany and the Netherlands were pooled in order to have more robust results and since it was discussed earlier that in both countries specifically former migrants with a guest worker background were studied.

In Indonesia, the experiments were conducted in hospitals and universities of Jakarta and Semerang in September 2011, after the official summer school break in Indonesia. Thus, the participants were not as stressed, since most of them had just had a vacation. Therefore, the participants did not have so much in their mind and could concentrate more on the experiment. Consequently, the results will be more meaningful.

The Ministry of Health in Indonesia approved the experiment, and decreed the hospital and universities to participate in the study. Thus, it was officially no longer a choice of the hospitals and universities to participate. The Hospital Managers and Deans of the Medical Faculties offered a room for the laboratory experiment. Each time, up to three physicians could enter the laboratory at the same time, watch the video, and fill in the computer-based questionnaire after.

In total, 272 physicians and medical students, who were already working in the hospital, participated in this experiment.

Results

Characteristics of the Participants

A total of 535 physicians participated in the experiment. 50.7 % were from Indonesia, 20.7 % from Germany and 28.3 % from the Netherlands. 34.8 % watched the video “possible angina pectoris”, 30.2 % the video “non- angina pectoris” and 34.1 % “definite angina pectoris”. The

proportion of male participants was 50.7 %, and 43.2 % were female participants. Age of the participants was between 20 and 85 years, 49.2 % being under 50 years old. 53.1 % of the participants were native physicians and 39.3 % were migrant physicians. Random assignments led to unbalanced demographic results on the physician. Only the severity of illness correlated with the race of the patient. This aspect, however, was controlled for in the analysis.

Attitude towards the elderly and immigrants

The first analyses were measuring attitudes towards the elderly and immigrants (see Table 1). The German and Dutch physicians were more likely to state that their preferred future living situation was in an elderly home than Indonesian physicians ($p<0.05$). Another of the constructs (Cronbach's alpha=0.602) to test attitudes towards the elderly was focused on negative stereotypes towards the elderly. German and Dutch physicians stated more negative stereotypes of the elderly than Indonesian physicians ($p<0.05$). Indonesians had a more negative attitude towards immigrants than German and Dutch (Cronbach's alpha=0.602):

Table 1: Attitudes towards the elderly and immigrants (Country comparison)

	GER/NL	Indo	F	η^2
Preferred living sitation as an elderly in an elderly home	2.658 (0.055)	1.597 (0.055)	182.695***	0.272
Attitudes towards the elderly	1.652 (0.042)	2.984 (0.043)	502.694***	0.509
Attitudes towards immigrants	1.466 (0.044)	2.303 (0.044)	16.458***	0.032

* p<0.05; ** p<0.01; *** p<0.001

Personality of the Patient

Afterwards the estimated personality of the patient was evaluated. The physicians judged the personality of the patients differently. The following features for personality were measured: friendliness, intelligence, self-control, knowledgeable, good communicator, independency, happiness, positive affect, indifferent, high socio-economic status, over report of pain, not showing up for follow up treatments, would go to rehab and sue for malpractice.

In Germany and the Netherlands migrants were estimated to have a less favorable personality than natives: They were estimated to be less knowledgeable ($p<0.05$), have a lower socio-economic status ($p<0.05$) and more likely not to show up for follow up treatments ($p<0.05$).

Considering that migrants were rated having a lower socio-economic status than natives is a common stereotyping measure. But all patients were (retired) bank managers, just as the natives so they should be rated with the same socio-economic status.

Based on this example, it can be said that migrants were perceived more negatively. Not all stereotypes and prejudices were significant, but this research is focusing whether there are prejudices and negative attitudes towards race and age. Thus, if some stereotypes are found, it can be confirmed, that racism occurs due to stereotypes.

In the end physicians had to give medical recommendation of the patients' condition. Results revealed that migrants were less likely to be referred to a thallium stress ($p<0.05$) or even no stress test ($p<0.05$) when needed. Thallium stress test is the most expensive stress test. Thus it could be concluded that physicians rather do not refer migrants to the most expensive stress test or even do not refer them to any stress test. This leads to the conclusion: Migrants are objectively discriminated against in German and Dutch health care.

Coming to the analysis of Indonesia, the results showed that Indonesian-Chinese was judged more negatively: They were assessed as less friendly ($p<0.05$), less self-controlled ($p<0.05$), less knowledgeable ($p<0.05$), to have a less positive affect ($p<0.05$), to be worse communicators ($p<0.05$), less independent ($p<0.05$), and more likely not to show up for follow up treatments than the Indonesians ($p<0.05$). Based on this result, we can say that Indonesian Chinese patients are associated with a more negative personality. Interestingly Indonesian-Chinese were also estimated as happier than the Indonesian. Nevertheless, this was only one personality estimation out of many.

Afterwards the cardiac categorization was analyzed. The results showed that Indonesian-Chinese patients were clearly discriminated against: the Indonesian-Chinese were categorized less likely with the right categorization of chest pain ($p<0.05$). Furthermore, they were more likely to be referred with a wrong stress test ($p<0.05$) and less recommended for coronary angiography ($p<0.05$). Based on these results we can say that Indonesian-Chinese patients are discriminated against in health care. This represents the overall situation in Indonesia: the Indonesian-Chinese have been suffering from discrimination for a long time. Discrimination due to race is sometimes present in the daily experiences of immigrants. Gehrlach *et al.* (2010) believe that the behavior of physicians towards migrant patients is influenced by a lack of empathy (Gehrlach *et al.,* 2010). However, there has been no literature reporting that the Indonesian-Chinese are also discriminated against in health care.

As for the elderly in Germany and the Netherlands, no significant differences between the younger and older patient regarding the estimation of the personality or behavior of the patient were found. Since this comes as a more surprising result and is against the literature about ageism, this should be further studied. One of the reasons could be that not the right stereotypes were chosen and thus the personality or behavior was not estimated to differ from the younger population.

Coming to the medical tests, the elderly were also less likely to be referred to do a regular stress test ($p<0.05$) when needed and were referred to a lower probability of coronary disease. Usually

due to the age, the elderly should be referred to a higher probability of coronary disease. Based on these result, we can also say that the elderly are objectively discriminated against in health care.

Interestingly the elderly was objectively discriminated against but not estimated with a worse personality, which should be further studied. One reason could be that they are not seen as social competition but there is still "taste" for discrimination, as Becker describes it. Thus, we can conclude that physicians might not indicate that the personality of the elderly is worse in the same way they indicate that the personality of the migrants is worse, but they just discriminate them. On the other hand, as said earlier, maybe the wrong stereotypes were chosen for this research. This would be a limitation of this study.

Comparing this with the Indonesian results, elder patients were being associated with a personality at least as good as younger patients. Elder patients were estimated with a higher socio-economic status than younger patients ($p<0.05$), although the elder patient was a retired bank manager, while the younger patient was a bank manager. Besides that no significant difference could be found, which led to the conclusion that the personality of the elder was not significantly estimated worse as the one of the younger patients. Furthermore, elder patients were most likely to be classified with the right category ($p<0.05$), which suggests a positive discrimination towards the elder patients.

Discussion

In this study racism and ageism in medical treatment between two Western countries, Germany and the Netherlands, were compared with Indonesia. The study replicated the experiment by Schulman *et al.* (1999) examining actual discrimination, such as whether race and age of the patient affects the physician's recommendation for cardiac catheterization, which is a more invasive procedure. To what extent the elder and migrant populations have been discriminated against in health

care has thus far not been sufficiently determined - nor has any comparison including cultural factors been made. A vignette experiment was used to examine the relationship between race, age and medical treatment, with respect to cultural values.

Therefore, the cultural values were first analyzed. We tested if Germans and Dutch have a more negative attitude towards the elderly than Indonesian. Indeed Germans and Dutch had a more negative attitude towards the elderly and preferred to live in an elderly home than with their family when they are older. Furthermore, interestingly Indonesians had a more negative attitude towards immigrants than Germans and Dutch. Due to the negative stereotypes against immigrants, it was rather expected that both regions would have negative attitudes against immigrants. Since these results are coming more as a surprise, it should be further studied, why Indonesians have a more negative attitude towards immigrants than Germans and Dutch.

Nonetheless, this also supported the results: The Indonesian-Chinese migrant was estimated much worse than the migrant in Germany and the Netherlands. However, both were discriminated against.

Furthermore, the elderly were not assessed with a worse personality than the younger population in Germany and the Netherland. However, they were still discriminated. The mistakes in the medical test could indicate that physicians want to conceal discrimination against the elderly by estimating the personality of the elderly as good as the personality of the younger patients. Another reason might be that ageism occurs more unconsciously than racism as described by Sassenberg *et al.*, (2007) and not due to stereotypes. A third explanation might be that the wrong stereotypes were chosen in the study. Nevertheless, the attitudes towards the elderly confirmed the results of the discriminatory behavior: Germans and Dutch had a more negative attitude towards the elderly than Indonesians.

That is why the elderly were not discriminated against, but rather positively discriminated in Indonesia.

Comparing these conclusions with the original study by Schulmann *et al.* (1999), it can be confirmed that the decision of physicians may be an important factor in explaining the differences in treatment of cardiovascular disease. However, these experiments have significant limitations. Further research should be conducted in order to understand the influence of values and demographic transition on racism and ageism in health care, especially why racism and attitudes towards immigrants occurs differently between the Western countries and developing countries, like Indonesia.

Nonetheless, one should keep in mind that these results are not representative and rather an explanation for the casual relationship of racism and ageism.

Furthermore, the study design differed between the Western countries and Indonesia: First, in Indonesia all physicians had to participate while in the Western countries the participation was voluntarily. This might have influenced the results, since in the Western countries participants might have differed from non-participants. Second, in the Western countries the study was partly done online. Nevertheless, no differences could be found in the results between the online and offline results.

More studies are required to fill the research gap on racism and ageism in the German, Dutch and Indonesian healthcare system, and to encourage the social and political changes needed to eliminate this form of discrimination especially in health care due to the vital effects. However, several implications can be derived from these studies. Firstly, one solution in the USA provides mandatory training in intercultural and social competences during medical school (Altshuler & Luberoff, 2003). In this way, medical students are made aware of unconscious discriminatory behavior at an early stage of their career.

A second suggestion to reduce racism and ageism in health care is to bring medical students into contact with the elderly or migrants, since this thesis has shown that those people who had a better relationship with the elderly did not discriminate against them. However, this solution is more difficult to implement, since people cannot be forced to spend time with the elderly or migrants. Nonetheless, the students could be encouraged by getting extra credit points for voluntary work.

A third suggestion is that patient data files could be analyzed. These patient data could be obtained by hospitals or insurance companies. This kind of research could, however, raise ethical issues due to confidentiality. Furthermore, if discrimination can be found in an experimental setting, where people show less discrimination, then discrimination in daily life should be even more (Heckman & Smith, 1995).

A fourth suggestion is that insurance companies or external companies check patients' files on an irregular basis, in order to prevent physicians from discriminating their patients.

Besides these suggestions, more research should be conducted on the cause of racism and ageism in health care. Two important aspects, which were not discussed in this paper, are the type of healthcare system and the respective insurance policies. These aspects often hinder physicians in providing proper care for certain sub-groups, as physicians mostly have to think about the cost and effects. In particular, if elder patients need a certain treatment, physicians have to consider whether the costs are higher than the effects.

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